



Memorandum

TO: ECONOMIC DEVELOPMENT AND
ENVIRONMENT COMMITTEE

FROM: Carl W. Mosher
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SUBJECT: SEE BELOW

DATE: 05-25-01

Approved

Date

**SUBJECT: REPORT AND RECOMMENDATIONS ON GREEN BUILDING
PROGRAM GUIDELINES**

RECOMMENDATION

That the City Council:

- Accept the report on the Green Building Guidelines Recommendations.
- Adopt the Green Building Policies as developed by the members of the community with the input of City Departments.
- For City of San José facilities:
 - Approve the Green Building Guidelines implementation goal that all new construction and major retrofit projects for all City facilities and buildings over 10,000 gross square feet of occupied space shall meet a “San José LEEDTM” Certified rating effective with the FY 02-03 Budget Allocations.
 - Direct staff to review current 2001-02 Capital Budgets to determine how budgeted projects could be incorporated into the Green Building recommendations, and return to Council with a report on the potential costs and impacts before the end of 2001. Include information related to Green Building Guideline compliance within each Project Award memorandum.
 - Direct the Environmental Services Department to continue to work with the members of the Green Building Task Force and Work Group and other City Departments to implement the Green Building Policies and Guidelines and evaluate the program and report back to Council within one year.

- For private sector facilities, direct staff to work with the community to encourage achievement of a “San José LEEDTM” Certified rating and identify and provide incentives and educational programs that help achieve those efforts.
- Approve the first amendment to the grant agreement with the California Integrated Waste Management Board extending the agreement from April 30, 2001 to December 30, 2001 with no additional cost.

REPORT IN BRIEF

This memorandum and report provides information and recommendations related to the establishment of green building guidelines within the City of San José. Information is provided on the research conducted to identify appropriate guidelines for City of San José facilities, the analysis conducted, and the stakeholders involved in the review process.

BACKGROUND

Significant strides have been made in the Green Building Program since Council directed staff on April 4, 2000 to continue to work with the members of the Green Building Task Force and Work Group and other City Departments to implement the Green Building Recommendations and report back to Council within one year. As part of the Council-adopted program, recommendations were to be made regarding green building guidelines for the City of San José. A status report on the educational activities of the Green Building Program was submitted to the Council on October 25, 2000. Within the City, the Green Building Program has the assistance of the Departments of Housing; Planning, Building and Code Enforcement; Parks, Recreation and Neighborhood Services; Finance; General Services; Public Works; Library; and the Redevelopment Agency.

ANALYSIS

I. Green Building Guidelines – Research

In order to establish a basis for the City’s Green Building Guidelines, Environmental Services Department (ESD) staff has performed extensive research into the green/sustainable building trends for cities and states around the country. Research into city green building programs or guidelines included Santa Monica, San Francisco, Oakland, Seattle, Portland, Austin, and New York City. Research into state green building programs or guidelines included Colorado, Minnesota, Pennsylvania, and of course, California.

In addition, staff reviewed various reputable green/sustainable building technical manuals and rating systems, particularly the *Leadership in Energy and Environmental Design (LEEDTM)* rating system, which is a voluntary, consensus-based, market-driven green building rating system developed by the U.S. Green Building Council (USGBC). The USGBC is a 700+ membership organization of

architects, builders, manufacturers, developers, federal, state and local governments. The City of San José is a member of the Council.

The LEED™ rating system is based on existing, proven technology and evaluates environmental performance from a “whole building” perspective. Building projects using LEED™ seek to achieve a level of either certified, silver, gold or platinum, based on implementation of a range of activities and achievement of point credits within the following categories: Sustainable Sites (14 total points achievable), Energy and Atmosphere (17 points), Water Efficiency (5 points), Materials and Resources (13 points), and Indoor Environmental Quality (15 points) An additional 5 points could be awarded for Innovation and the Design Process.

Different levels of green building certification are awarded based on the total points earned. The system is designed to be comprehensive in scope, yet simple in operation. Award levels are based on the number of points achieved:

LEED Certified	26-32 points
LEED Silver	33-38 points
LEED Gold	39-51 points
LEED Platinum	52+ points

Throughout the United States, the range of proposed and existing green building guidelines is extensive. Some cities and states (Santa Monica and Minnesota) spent hundreds of thousands of dollars and/or hired technical consultants to develop their own guidelines or rating system. Others with limited time and resources (Portland, Seattle, and California for state facilities) decided not to “reinvent the wheel” and looked to adopt the nationally recognized LEED™ rating system as a template with some supplements. Considering the impact to staff, resources and time to develop green building guidelines, ESD staff decided to follow the example of Seattle, Portland and California by recommending a “San José LEED™”.

The “*San José LEED™*” *Green Building Rating System* is a city performance-oriented green building certification system designed for rating new and existing commercial, institutional, and high-rise residential buildings based on the U.S. Green Building Council’s LEED™ Rating System. In addition to the U.S. Green Building Council Guidelines, which cover energy, water, materials, site design, and indoor environmental quality, the San José LEED™ Guidelines (draft attached) would also incorporate existing local standards, evolving national and international guidelines, and the priorities of the City of San José and its residents.

Why Green Building?

Development and construction practices are significant contributors to the depletion of natural resources and a major cause of air and water pollution, solid waste, deforestation, toxic wastes, health hazards, global warming, and other negative consequences. Building construction, operations and demolition directly or indirectly consume over 40 percent of all U.S. energy and 66 percent of all U.S. electricity. Buildings use 25-30 percent of all the world’s wood and raw materials, 25 percent of water, and account for 35-40 percent of municipal solid waste (28% of this coming from construction

and demolition debris). In addition, buildings are a major source of the pollution that causes urban air quality problems, and the pollutants that many scientists believe cause climate change.

The built environment has a profound impact on our natural environment, economy, health and productivity. Green building practices provide the framework and tools to build in an efficient, healthy, and ecologically responsible manner. Encouraging green building practices is in the public's interest because these techniques maximize environmental, economic and social benefits. Specific benefits include:

Environmental Benefits

- Minimization of local ecological degradation (habitat, air, soil, and water) by enhancing and protecting natural habitats through efficient site and building design, sustainable construction practices, and low impact building materials and operational practices.
- Improved air and water quality.
- Reduction of solid waste.
- Conservation of energy, water and other natural resources.

Economic Benefits

- Monthly savings to building owners and tenants through reduced operation costs and increased operation and maintenance efficiencies.
- Enhanced asset value and profits.
- Improved employee productivity and satisfaction.
- Keeping money in the local economy and creation of new local industries and jobs.
- Reduction of public infrastructure costs related to development.

Social Benefits

- Improved air, thermal, and acoustic environments.
- Enhanced occupant comfort, well being and health.
- Promotion of San José's energy, land use, environmental and growth-management policies.
- Strengthened established goals related to increased density, mixed use and transit-oriented development, stormwater and erosion control, brownfield redevelopment, and increased bicycle and pedestrian access.
- Contributions to community health, vitality and aesthetics.

II. Green Building Guidelines – Implementation Issues

In order to ensure appropriate implementation of any green building guideline recommendations within the private sector and City operations, ESD staff has been conducting ongoing discussions with the Green Building Work Group and Task Force, and among many City Departments, including Public Works (A&E), Planning, Building and Code Enforcement, the Redevelopment Agency, Housing, Parks, Recreation and Neighborhood Services and General Services. Discussions have centered on the potential barriers to implementation and the types of assistance and resources that will be necessary to implement any guideline recommendations. The role of ESD in relation to other City Departments was also discussed.

From these ongoing discussions, it has become very clear that four main issues should be addressed in the implementation phase:

A. Education and Training Needs

- To complement a shift toward more sustainable buildings, on-going, multidisciplinary education and training is needed for those who create buildings and those who occupy them. This includes people in the fields of building design and construction, finance, building standards and specifications, environment and health, and building operations and maintenance.
- Internal staff and clients of Public Works and PCBE need to be well-versed in the general principles of green buildings and the specific implications of the LEEDTM rating system.
- Education is also necessary for external consultants used by Public Works and other relevant Departments (Library, RDA, etc.).
- Education and training is essential to ensure successes are shared and everyone is aware of process changes.

B. Project Implementation Costs

- First costs (the initial design and construction costs) of green buildings will vary significantly depending on the specific project goals. While there are many significant design opportunities that can be implemented at 'no additional cost' (e.g., proper solar orientation, south facing windows, etc.), some features will cost more initially, both in design and material costs (e.g., highly efficient HVAC and lighting systems, thermally selective windows to reduce heat gain, etc.).
- In addition, green buildings can incur higher first costs than other buildings as a result of additional design analysis, computer energy modeling, product research, limited product availability, and life-cycle cost analysis for alternative materials or building systems. These higher upfront costs can be recovered through lower energy, water, materials, and waste management costs; improved health and productivity of occupants; lower debt service; decreased liability claims and building insurance; longer use of buildings and materials; and better communities. Thus, significant benefits for the City can be achieved through reduced operating costs. However, these gains can only be reaped by making an upfront investment.
- The professional green building community estimates that additional design and construction costs for implementing green building practices through the LEEDTM rating system could be as low as 0-3% for LEEDTM Certified, to 10% or more for higher LEEDTM ratings (Silver, Gold, or Platinum). In addition, the stage at which the LEEDTM criteria is introduced into the design process can significantly effect the magnitude of additional design and construction costs (the earlier LEEDTM is introduced, on average the less costly it is).
- Many new city facilities were budgeted as part of the FY2001-02 capital improvements budget and were not able to incorporate additional funds for green building design and technology improvements. Environmental Services Department staff has been working very closely with

these departments and over the next few months would conduct a review of these projects to identify how green building could be incorporated into those projects. Staff is proposing to include information related to Green Building Guideline compliance within each Project Award memorandum.

C. Staffing needs

- Additional green building staff, distributed through targeted City Departments (ESD, Public Works, and PCBE), would be necessary to implement the green building guideline recommendations.
- The City of Portland, in its “Green Building Action Plan,” called for eight staff positions (5.5 FTE) from five bureaus (equivalent to San José City Departments) to implement their “Green Building Initiative.”

D. Incentives

- Currently, no dedicated incentives exist for green building. However, incentives are available for efficient and alternative energy and water technologies. Information on these incentives are provided to the design and building sectors as part of the outreach program.
- Specific incentives related to City permitting and fees/taxes are being reviewed. These incentives could include waivers of certain taxes associated with the installation of specific energy technologies (e.g., renewables).
- If additional staff and resources are approved, a green building staff person is envisioned for the building/permit review section within PCBE. This person could be available to expedite the permit (through the special handling process) and plan review process for green building projects.

Internal departmental stakeholders agree that the City’s ESD should be responsible for coordinating any educational, technical and financial resources available to City departments that support and promote sustainable design and construction of City facilities. The City’s ESD shall also be responsible for coordinating the annual report to the Council.

III. Green Building Policies and Guideline Recommendations

The following recommendations are submitted for Council approval. They were developed with the input of the Green Building Work Group, City Departments, Planning Commission and the Mayor’s Green Building Task Force.

Vision

In August of 1994, the San José City Council adopted San José 2020 as its general plan. Included within the plan was a Major Strategy entitled the “Sustainable City Major Strategy.” The Sustainable City Major Strategy is a statement of San José’s desire to become an environmentally and economically sustainable city. The Sustainable City Major Strategy defines a sustainable city as “...a

city designed, constructed, and operated to minimize waste, efficiently use its natural resources and to manage and conserve them for the use of present and future generations.”

To achieve this end, the City of San José envisions a Green Building Policy that fosters long-term social, economic, and environmental sustainability in building and development while making green building the standard practice in San José and celebrating sustainability as a core value to the community.

The vision for Green Building in San José is a place where the people have the knowledge and opportunities to build and occupy dwellings that have a maximum impact on the well being of the occupants and a minimal impact on the environment (Adopted by the San José City Council-4/4/00).

Purpose

The purpose of a Citywide policy on green building is to demonstrate the City’s commitment to environmental, economic, and social stewardship, to yield cost savings to the city taxpayers through reduced operating costs, to provide healthy work environments for staff and visitors, and to contribute to the City’s goals of protecting, conserving, and enhancing the region’s environmental resources. Additionally, the City hopes to provide leadership by setting a community standard of sustainable/green building.

Green Building Policies

The green building recommendations center on three main policies:

Policy #1: The City of San José shall adopt Green Building Policy goals (attached) and incorporate green building principles and practices into the planning, design, construction, management, renovation, operations, and demolition of all City facilities that are constructed, owned, managed or financed by the City.

Policy #2: The City of San José shall adopt the “San José LEEDTM” Green Building Rating System as the green building design guideline for its ongoing and future program areas and incorporate this system into all City facility projects that are constructed, owned, managed or financed by the City.

Policy #3: The City of San José shall provide leadership and guidance to encourage the application of green building practices in private sector planning, design, construction, management, renovation, operations, and demolition of buildings by promoting the voluntary application of the San José Green Building Policy goals and the “San José LEEDTM” Green Building Rating System.

San José Green Building Guidelines Implementation – Recommendation

City Facilities

- Approve the Green Building Guidelines goal that all new construction and major retrofit projects for all City facilities and buildings over 10,000 gross square feet of occupied space shall meet a “San José LEED™” Certified rating effective with the FY 02-03 Budget Allocations.
- Direct staff to review current 2001-02 Capital Budgets to determine how budgeted projects could be incorporated into the Green Building recommendations, and return to Council with a report on the potential costs and impacts by winter of 2001. Include information related to Green Building Guideline compliance within each Project Award memorandum.
- Direct the Environmental Services Department to continue to work with the members of the Green Building Task Force and Work Group and other City Departments to implement the Green Building Policies and Guidelines and evaluate the program and report back to Council within one year.

Exemptions

The City of San José Green Building Policy strategy of achieving LEED™ Certified shall not apply to current City facilities and major renovation projects that have been proposed in the FY01-02 Capital budget. However, these projects shall still implement City of San José Green Building policy goals and strategies to the maximum extent practicable. Documentation of on-going efforts will be provided as part of the annual report.

Many projects do not meet the policy criteria, including buildings smaller than 10,000 gross square feet, unoccupied buildings, parks, roadways, and other infrastructure. City facility construction projects that are unoccupied or serve specialized functions (e.g. pump station, garage, storage building, etc.) are not subject to the City’s green building guidelines and do not need to go through an exemption process.

Even though projects may become exempt from the City’s required green building guidelines, project managers and design teams are encouraged to apply the relevant portions of LEED™, and develop goals that increase the environmental, social, and economic benefits of the project.

Private Sector Facilities

- Direct staff to work with the community to encourage achievement of a “San José LEED™,” Certified rating and identify and provide incentives and educational programs that help achieve those efforts.
- Direct the Environmental Services Department to continue to work with the members of the Green Building Task Force and Work Group and other City Departments to implement the Green Building Policies and Guidelines and evaluate the program and report back to Council within one year.

IV. Next Steps

ESD staff will continue to work with the Interdepartmental Steering Committee to prepare a detailed work plan and begin implementation of the guidelines, pending resource and staffing allocations. Education and training for the private sector would also continue based on existing and/or additional resources either from City allocations or from grants as identified. In addition, staff would continue to work with the Housing Department and residential stakeholders to encourage adoption of green building practices and principles for the residential sector, including affordable housing.

The most overlooked element of green building is operations and maintenance (O&M) practices. O&M practices impact both the building owner's bottom line costs and tenants' health, comfort, and safety. Green building O&M practices enhance both environmental quality and economic performance. Developing clear O&M procedures can help the City operate facilities more effectively and maintain the integrity of the building systems. The Environmental Services Department would work with the General Services Department and other appropriate Departments to develop *San José Green Building Operations and Maintenance Guidelines* for all City operations and maintenance practices undertaken by the City or its contractors.

PUBLIC OUTREACH

In addition to discussions with the City departments on the green building guidelines, the proposed policies and guidelines were reviewed by the following entities:

- **Green Building Work Group** – a voluntary group of more than 200 citizens, businesses, architects, manufacturers that met January 2001 regarding the proposed guidelines. In addition, the proposed draft policies and guidelines were sent via email to the work group for their input. The Work Group initially recommended that San José strive to achieve a “Silver” rating within the LEEDTM system. Additional information on costs associated with that recommendation were identified, and the subsequent recommendation to achieve LEEDTM certified was presented to the Work Group for their input.
- **City of San José Planning Commission** – the draft policies and guidelines were presented to the Planning Commission during a Study Session on May 9, 2001 before their regular meeting. The Planning Commission recommended adoption of the guidelines for all new City facilities and applicable renovation projects that have not yet undergone budget resource allocations. The recommendations presented in this report and memorandum reflect their input, and recognize the need to identify costs and opportunities for incorporating green building within current City projects.
- **Mayor's Green Building Task Force** – draft policies and guidelines incorporating comments and recommendations from the Planning Commission were presented to the Task Force on May 11, 2001. The Task Force recommended adoption of the guidelines for all new City facilities and applicable renovation projects that have not yet undergone budget resource allocations. The

recommendations presented in this report and memorandum reflect their input, and recognize the need to identify costs and opportunities for incorporating green building within current City projects.

COORDINATION

Preparation of this report and memorandum was coordinated with the assistance of the Departments of Housing; Planning, Building and Code Enforcement; Finance; General Services; Public Works; Library; Parks, Recreation and Neighborhood Services; and the Redevelopment Agency.

COST IMPLICATIONS

In order to fully achieve the policies and implementation plan, a Green Building Program start-up team of new staff would be necessary to facilitate and expedite the transition to a more sustainable building approach for city and private sector projects. Current staff resources are primarily grant funded, with funding scheduled to end by December 2001. The original grant agreement was to end in April, 2001, but delays in signing the agreement led us to request an amendment to the grant agreement enabling us to continue until December 2001. Additional grant resources are being explored, but recommendations for staffing are included in this memorandum. Staff recognizes that as green building becomes “mainstream” the members of the proposed start-up team could be redeployed within appropriate city departments.

A Green Building start-up team could consist of the following staff:

Green Building Program Coordinator (1.0 FTE, ESD)

Takes responsibility for all staffing and operations of the City’s *Green Building Program* and is responsible for coordinating the implementation of the green building work plan. Duties to be performed: supervise personnel; direct work plan and annual program evaluation; oversee all education and training efforts; network and make presentations to key stakeholders; coordinate with other City Departments to compile and publish case studies; develop partnerships; and fundraise.

Green Building Education/Outreach Coordinator (1.0 FTE, ESD)

Responsible for education, training, outreach, and promotion efforts. Duties to be performed: cultivate education and training partnerships; develop an education and training curriculum; develop and publish promotion and outreach materials; coordinate promotion and outreach efforts.

Green Building Design and Construction Technical Advisor (1.0 FTE, Public Works/A&E)

Responsible for the development and management of technical services and resources. Duties to be performed: develop and provide consultation services; intake and respond to inquiries for technical information, develop and publish design and construction guidelines; develop and publish evaluation tool and rating system; and provide technical information for case studies and other materials.

Green Building Permit Process and Plan Review Coordinator (1.0 FTE, PBCE, Building Division)

Responsible for facilitating the processing of green building permits and plan review. Duties to be performed: develop permit review and processing strategy for green building projects; train relevant permit staff on green building practices, systems, and materials; and develop effective interface between green building technical services and Permit Center staff.

Assuming these proposed positions, along with associated costs for training and consultant services, initial start-up costs could be in the \$300,000-400,000 range. Additional design and related costs associated with incorporating green building principles and practices to achieve a LEEDTM Certified rating would be brought forward with proposed budgets for all new facilities. A full report will be presented to the Council before the end of 2001 on the potential costs as part of the review of current 2001-02 Capital Budgets.

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